Attorney Docket No. 07402-026001
Application No. 09/838,707
Amendment dated May 18, 2004
Reply to Office Action dated February 19, 2004

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

Claims 1-13, 16-18, 29-36 and 38 stand rejected under 35 USC 103 as allegedly being unpatentable over Holland in view of Akai. This contention is respectfully traversed.

The rejection admits that Holland does not teach a grid of wires and/or a scintillator. The rejection alleges that this missing part is shown in Akai. However, this contention is respectfully traversed for a number of independent reasons.

First, even assuming that the hypothetical combination of Holland in view of Akai could be operatively made (which, by the way, will be traversed herein), the limitations of these rejected claims still would not be obtained. Akai does in fact teach conducting wires 5 and 6. However, these conducting wire as logically cannot be "substantially orthogonal" as claimed. Akai describes electrode arrays 5 and 6 on the same surface. Note that these electrode arrays are shown in figures 3 and 4, which show cross sections, and show edge-on views of the electrodes 5 and the electrodes 6. According to the view of both figure 3 and figure 4, both of these electrodes 5 and 6 are both extending in the same direction, not orthogonal to one

another. If they were orthogonal, they could not be seen in the views of figures 3 and 4.

In fact, nowhere is there any teaching or suggestion of anything to the contrary. The electrodes are taught by Akai to be used for different purposes. For example, column 4, line 18 describes the electrode 6 being maintained at ground potential, while column 4, lines 26-27 describe the electrodes 5 as being used for detection. Therefore, these conducting wires are not "substantially orthogonal".

Holland in view of Akai does not teach wires "in contact with a bias layer" as required by claim 1. In fact, the wires 5 and 6 are in contact with different structures. The wires 5 are in contact with the gates, presumably to receive the electrocurrent therefrom. In contrast, the electrodes 6 are in contact with the structures 10-3, etc. which are described as being channel stopper regions. Clearly the orthogonal wires in Akai are not "in electrical contact with the bias layer" as claimed.

For reasons given above, the grids do not extend substantially orthogonal to one another, and therefore the grid does not surround a plurality of areas, as claimed.

Therefore, for these reasons, claim 1 should be allowable along with the claims which depend therefrom. Each of these

dependent claims should be allowable on its own merits. For example, claims 31 and 32 define a bias voltage connected to the grid of wires, which obviously is not the case in Akai, for reasons discussed above. The wires 5 and 6 in Akai are connected to different things, and clearly therefore cannot be connected to the bias as claimed.

Claim 35 defines that the scintillation array comprises trenches formed in the substrate and extending partway through the substrate. The rejection states that the scintillation comprises trenches (2), reflective material formed in the trenches (2a). However, Akai clearly shows that the trenches go all the way through the scintillation material, and therefore do not extend "partway through the substrate" as claimed.

Claim 38 specifies the conducting wires being formed as colinear with the antireflection layer. Akai teaches the wires being coplanar with the "adhesive layer 4", not with an antireflection layer. See, for example, column 3, lines 49-50.

Claims 19-21, 24-28 and 39-43 stand rejected as being obvious over Holland in view of Akai. These claims should, however, be allowable for analogous (reasons to those discussed above). Specifically, Holland in view of Akai does not teach a grid of conducting wires surrounding each of the pixels (reasons discussed above), or that the grid of conducting wires is an "in

electrical contact with the bias layer", for reasons discussed above. Therefore, claim 19 should be allowable for these reasons along with the claims which depend therefrom.

Claim 39 specifies the antireflection coating being coplanar with the conducting wires. As discussed above, this is not taught or suggested by Akai.

Claim 41 defines the array of conducting wires forming a two-dimensional grid where the perimeter forms substantially rectangular areas forming a pixel. As described above, Akai does not teach orthogonal wires which are formed in this way. Therefore, claim 41 should be allowable along with claims 42 and 43 which depend therefrom.

Claim 43 defines the antireflection coating being coplanar with the array of conducting wires and hence should be allowable additionally for these reasons.

Claims 14-15 and 37 stand rejected over Holland in view of Akai and further in view of Kasai. Claims 22-23 and 44 also stand rejected over this hypothetical combination. However, these claims inherit the limitations discussed above and should be allowable for these reasons.

Finally, it is respectfully suggested that one having ordinary skill in the art would not be able to operatively combine Holland with Akai, and that doing so would require undue

experimentation, which would not be carried out by one having ordinary skill in the art. Holland teaches a system using a back illuminated CCD, that is it is illuminated from the side which does not have the gates and electrical structural elements thereon. In contrast, Akai clearly teaches the illumination coming from the side which does have the gates such as 12-1, 12-2. The rear side 7 of the diode is a ground electrode, and one having ordinary skill in the art could not think to operatively modify Akai using the teaching in Holland, or vice versa. In fact, Akai would have to be completely redesigned in order to allow it to receive illumination from that back side. Certainly there is no teaching or suggestion of how this could be done in Akai. Therefore, the hypothetical combination of Akai view of Holland is itself flawed and would not be made by one having ordinary skill in the art. And moreover, to repeat the above, even if one having ordinary skill in the art could operatively combine these references, it would still not teach or suggest this hypothetical combination.

It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be

exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper; and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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